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THE BRITISH JOURNAL

OF

OPHTHALMOLOGY

JUNE, 1923

COMMUNICATIONS

A WATERTIGHT SUTURE IN TREPHINING

BY

R. FOSTER MOORE

LONDON

I BELIEVE it is the experience of most ophthalmic surgeons, that in a certain number of cases of trephining, a localized cyst-like bleb is formed over the trephine hole.

The development of this bleb seems to be disadvantageous in several ways.

1. The presence of a localized cystic swelling, having sharply defined limits, seems to imply that the drainage into the general subconjunctival space is not really free, and indeed I believe in many such cases it is very defective.

2. The conjunctiva forming the bleb is often thin and translucent looking, containing few vessels, and appears to offer a poor barrier between the interior of the eye and the exterior, and would seem to predispose to late infection, a rare complication in my experience.

3. The swelling itself sometimes attains sufficient size to show through the upper lid, and in cases where for special reasons it becomes desirable to trephine below the cornea, the disadvantages of such a swelling are greater.

In my last twenty-two cases of trephining I have used a method which seems to obviate these objections; a bleb is not formed, a good conjunctival covering is obtained, and a widespread area of

diffuse conjunctival infiltration results, as is shown by oedematous pitting on pressure with a glass rod.

The method consists in sewing together the edges of the original conjunctival incision with a continuous stitch: the suture should be of fine silk and preferably black. The important points are

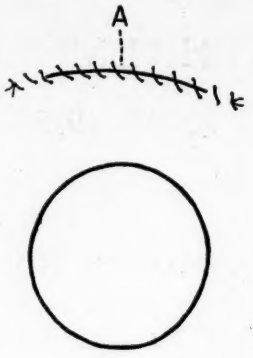


FIG. 1.

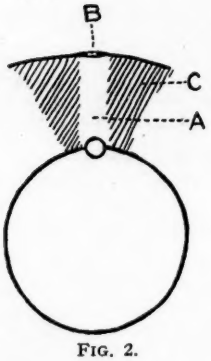


FIG. 2.

that it should be carefully and accurately applied, and that it should start and end well beyond the limits of the incision (A, Fig. 1), the whole idea being to make the wound water-tight against leakage of aqueous through it.

I suggest that the method of production of the cystic bleb is somewhat as follows:—

After the operation, the area of incision in the subconjunctival tissues is so extensive as compared with the trephine hole, that the conjunctiva is at once stuck down to the underlying sclerotic over almost the whole of the area, a very narrow track (A, Fig. 2)

being sufficient for the free escape of the aqueous into the conjunctival sac.

As healing proceeds, there comes a time when the gradually contracting hole of escape (B, Fig. 2) into the conjunctival sac becomes finally sealed; the surrounding area of the former conjunctival flap (C, Fig. 2) being by now firmly healed to the underlying coats, the track is limited by adhesions all round, becomes distended by aqueous, and so the cystic bleb is formed. If now the line of the original conjunctival incision is made water-tight at the time of operation, the flap from the very first becomes distended by the aqueous, as can be seen within a minute or two of the completion of the suture, and the surrounding subconjunctival tissues, outside the area of operation, become infiltrated so as to look as if a subconjunctival saline injection had been given.

The whole extent of the flap is thus prevented from becoming sealed down to the underlying tissues, and a wide flat area, extending wide of the area of operation, of filtration is produced, which pits on pressure with a glass rod, and which, I believe, is permanent.

I have carried out this manoeuvre on my last twenty-two cases; some of them have been done a short time only, but some of them have been watched for fifteen months, and although it is early to make a dogmatic statement, up to the present time there has been one case only in which there was the slightest indication of a bleb, and this was very slightly prominent.

There is, I believe, an additional advantage, and that is the early formation of the anterior chamber which results; it is sometimes formed in a few hours; I have seen it fully formed in eight hours. Sometimes it reforms and empties again on the fourth or fifth day, owing, I imagine, to the stitch having cut out, but it seems in these cases that the wide filtration into the tissues is established, and the tissue spaces having been opened up, continue to permit free filtration; in other cases the formation of the chamber does not appear to be hastened.

It is often a little difficult to say the precise day on which the anterior chamber is reformed, I therefore asked Mr. Baranov and Mr. Parker, House Surgeons at Moorfields, to try and form an estimate as to whether there was any shortening of the period requisite for the formation of the chamber in these cases, as compared with other cases in hospital done at about the same time by other surgeons. I can only say that their impressions confirm my belief that there is a gain in this respect.

My chief object in putting forward these incomplete observations is to induce others to give the method a trial, and so to determine its value.

HYPERPLASIA OF THE HYPOPHYSIS CEREBRI?

BY

J. D. CUMMINS

DUBLIN

ENDOCRINE therapy is, for the most part, still in an empirical stage. That there is a chemical inter-relation between the organs, having an internal secretion, one cannot doubt. And so, in vague morbid states, attributed to disharmony between these organs, endocrine therapy is employed, with the hope of restoring the normal harmonious relationships. Of the endocrine preparations, thyroid extract is, perhaps, most frequently used in this way. Sometimes the effect is very gratifying; at other times no apparent improvement takes place. The following case is one of the gratifying ones, and has certain features of interest.

An unmarried woman of 33 had been complaining of progressive failure of vision during three months For a year she had been under the care of a physician for amenorrhoea, and during that time had become very stout and lethargic. If the patient sat down to read or sew she often fell asleep. Previously the patient had led an active life, and, but for suppurating cervical glands in childhood, had never been ill.

Examination of the eyes: R.V. 1/60, L.V. 6/18.

Bitemporal hemianopia—no error of refraction—Wernicke's pupillary reaction not obtained—discs hyperaemic, otherwise fundi normal.

Gynaecological examination: Uterus small, in proper position —no pathological evidence in pelvic viscera.

X-ray report. No enlargement of pituitary fossa—contours of sella Turcica and clinoid processes well-defined and regular. Wassermann reaction negative.

Urine free from sugar and albumin—no polyuria.

This clinical complex recalled some of the concomitants of pregnancy—the amenorrhoea, the increase of weight (over and above the contents of the gravid uterus), the bitemporal contraction of the visual fields, the hypertrophy of the hypophysis. The thyroid gland may show a swelling during pregnancy and at each menstrual period. And, in congenital aplasia of the thyroid, an enlargement of the hypophysis takes place (Zuckermann).

In dystrophia adiposa genitalis, dependent upon disease of the anterior lobe of the hypophysis, there is an excessive deposit of adipose tissue throughout the body, with involution of the genitalia.

Of particular interest, in my case, were the impairment of vision and, especially, the hemianopic fields, which provided a reliable means of observing the effects of treatment, which consisted of one grain of thyroid extract daily by the mouth.

There was a rapid improvement in the right eye, visual acuity increased from 1/60 to 6/60, and the field showed a definite enlargement in nine days. The improvement continued, without interruption, until full vision and a full field were regained by each eye. The dates on the accompanying charts mark the rate of improvement.

As I hinted in my opening paragraph, the administration of thyroid extract was empirical. I hoped, by daily repeating a small dose, to coax back into agreement the hypothetically disordered relations between the hormone-producing organs. It was a lucky hit. But how was the bitemporal hemianopia to be explained? And why was the vision of the right eye more impaired than of the left? The conjecture, which I am about to offer, may appear less fanciful, if it is borne in mind that there was no clinical evidence of increased intra-cranial pressure; that there was no enlargement of the pituitary fossa or indistinctness of the clinoid processes; and, finally, that the efficacy of the treatment manifested itself promptly.

I conceived that a hyperplasia of the anterior lobe of the hypophysis formed a mass, which protruded through the top of the sella Turcica and inclined towards the right, rather than straight forwards towards the chiasma. Then, either by pressure, partly on the chiasma and partly on the right optic tract, or by toxaemia (as I think more likely) analogous to that which may bring about retrobulbar neuritis in sphenoidal empyema, the hypothetical mass determined the characters of the fields and the unequal impairment of central vision.

Menstruation recurred five months after treatment had been begun. Two months later the regular rhythm of the function was restored. Treatment was discontinued. There has been no recurrence of the symptoms.

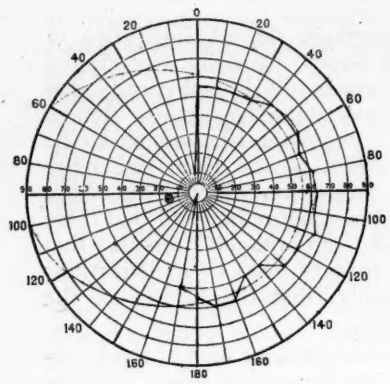
While under treatment, a record was made at regular intervals of the patient's weight. To her great surprise there was no progressive diminution in weight, although four months of treatment had necessitated the "taking in" of her various garments. " It is certain that I am getting thinner," wrote the patient, and then, somewhat petulantly, " I suppose I'm becoming more solid."

The charts represent the fields of a 3 mm. white spot. On January 10, 1922, there was an absolute central scotoma for red, green and blue. Peripheralwards the colours were recognized.

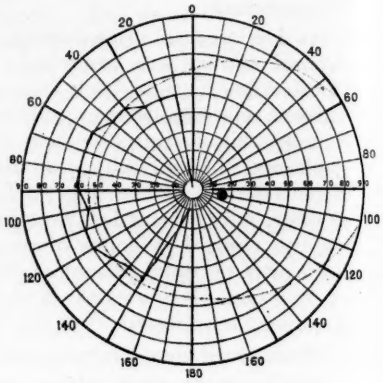
In the right eye, peripheral colour perception was confined to the upper nasal quadrant.

As the patient lived 90 miles from Dublin, and as travelling was a somewhat adventurous affair, the number of visits was few and but little time was available for plotting out colour fields.

L JANUARY 10, 1922. R

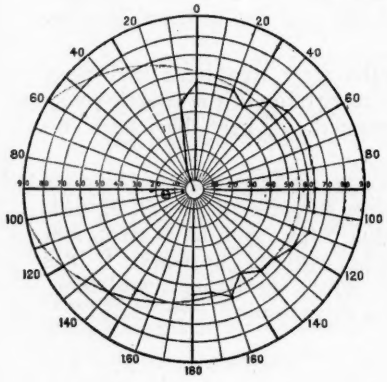


Visual Acuity—6/18.



Visual Acuity—1/60.

L JANUARY 19, 1922. R



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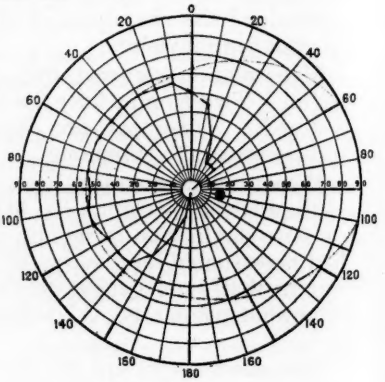
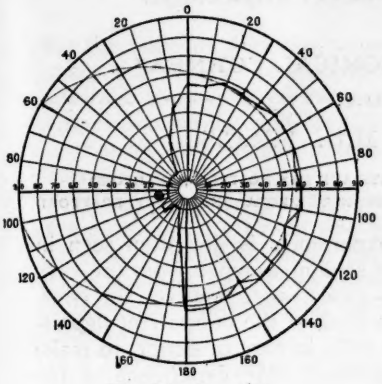


Visual Acuity—6/60.

L FEBRUARY 2, 1922. R



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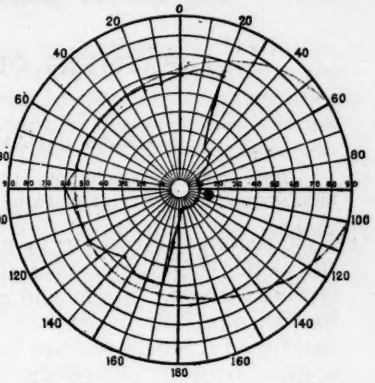
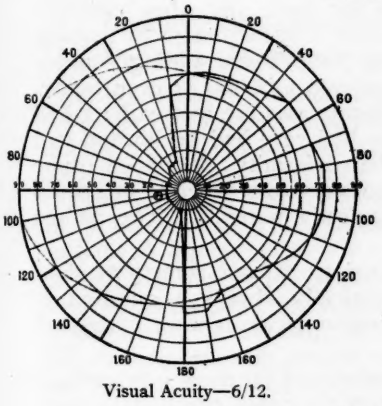


Visual Acuity—6/24 (momentarily).

L MARCH 8, 1922. R



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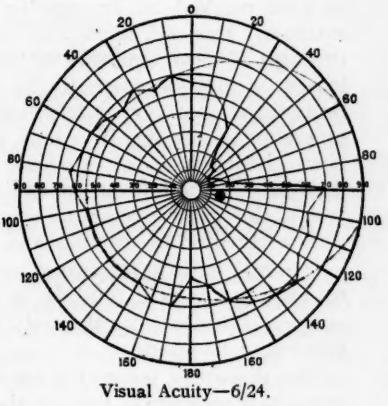
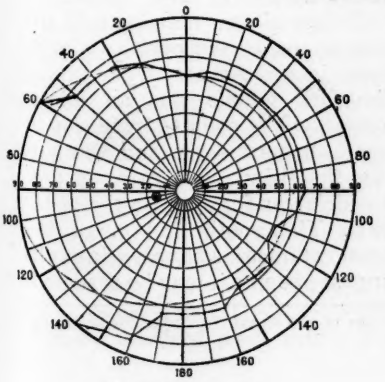


Visual Acuity—6/24.

L JUNE 18, 1922. R



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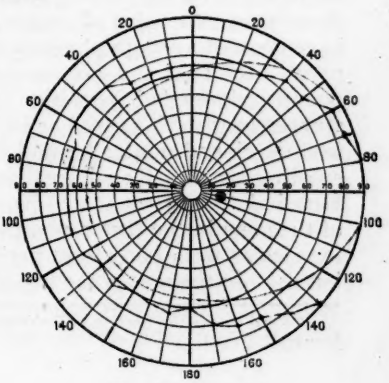

Visual Acuity—6/6.

TREATMENT OF CONICAL CORNEA*

BY THE LATE

CHARLES KILLICK, M.D., F.R.C.S.

HON. OPHTHALMIC SURGEON, ROYAL EYE AND EAR HOSPITAL, BRADFORD
HON. ACTING CONSULTING OPHTHALMIC SURGEON, THE ROYAL INFIRMARY, BRADFORD

KERATOCONUS, according to my experience, is not often seen in the earlier stages, and patients are seldom watched from the very commencement. Slight and early cases may, however, be overlooked, especially in the strenuous work of the out-patient department, and it would perhaps be as well, in case of doubt, to make a more frequent use of Placido's disc. My experience of the disease is when it has reached an advanced stage, a definite and obvious cone has appeared in each eye, either or both of which may be marked by an opacity on the apex, and when vision is extremely reduced, usually to less than 6/60; although by looking through a small aperture or stenopoeic slit and adding concave lenses, it may occasionally be improved to 6/24, or even better. Sometimes, but very rarely, unilateral cases are met with: I had one some years ago in a lady who had very bad health and had been bedridden for years. The deformity developed quite suddenly in the left eye, and did not vary over a period of several years, the right eye remaining perfectly normal. The patient ultimately died of tuberculosis.

Patients with keratoconus are anxious to have something done to improve vision, and it is practically always a question of surgical interference; the only thing to decide is what is the best procedure to adopt.

The disease is somewhat rare and occurs far more frequently in women than men. Taking the last six cases which have come under my care, five belonged to the female sex; of these, however, there were two pairs of sisters. All four sisters may be said to have been of average physical development, except one, a trained nurse, tall, thin and not very robust in appearance, who subsequently developed phthisis. The fifth female was an idiot, stunted in growth as well as in intellect. The solitary male was a well-developed adult; he had never had good sight and was an employee at the Royal Institute for the Blind. He came to the Hospital on account of an opacity which was forming on the apex of the cone in the better eye, the left. This youth, and one of the females as well, had slight peripheral cataractous changes in both lenses. In the case of the two youngest patients it may be assumed

* Read before the Section of Ophthalmology of the Royal Society of Medicine, on January 12, 1923.

that the affection was due to an error in development, but in the others it is difficult to account for. It seems, as my little series indicates, to have a tendency to occur in more than one member of the same family, and Mr. D. Wilson, of Huddersfield, informs me that he also has two sisters under his care suffering from the disease.

The pathology has not been fully worked out as the opportunity of microscopically examining eyes with keratoconus has seldom occurred. Parsons states that Bowman's membrane is intact, but is thinned and wrinkled and that Descemet's membrane is unchanged. He mentions the following as the main theories of causation :—

1. Relative increase of intraocular tension.
2. Malnutrition of the cornea.
3. Inherent weakness of the cornea.
4. Defective embryological development.
5. Disease of Descemet's membrane and epithelium.

Collins and Mayou state that the opacity at the cone apex is due to rupture of Descemet's membrane. Fuchs says that the disease usually commences between the ages of 12 and 20, it attains a maximum but does not recede. Ulceration or rupture of the cone has not been observed. The corneal opacity may be attributed partly to laceration of Descemet's membrane and partly to mechanical injury.

Our knowledge of the pathology is therefore only scanty; what is certain is that the cornea is much thinned and may be reduced to one-third of the normal. The great difficulty is how best to deal with this serious and chronic malady. In the early cases much may be done, according to the late Mr. C. Wray, by general treatment. I should imagine, however, that his method is difficult to carry out, especially in the case of hospital patients, as it is rigorous and involves complete rest for the eyes for long periods. In the more advanced cases where nothing remains but to have recourse to surgery, general treatment must, of course, play a part, but it has no curative action. Two of my cases, the girl and the youth, were brought because of the opacity which had formed on the cone, and which had still further impaired their already very imperfect sight. In the first case surgical methods were out of the question on account of the mental condition. I strongly urged the youth, however, who had cataractous changes in addition to keratoconus, to submit to operation, as there appeared to be a fair chance of improving his vision, but he declined. For both these patients I was compelled therefore to adopt general treatment, which practically resolved itself into a firm pressure bandage and a tonic.

The result was that almost complete corneal transparency was restored in a short time; the improvement was definite and marked, and I have observed the same effect in other cases. While a pressure bandage will, however, from the support it gives to the cornea, restore transparency, it has no curative action in bringing about corneal flattening. The main operative methods are cauterization of the cornea, with or without perforation, combined if necessary with optical iridectomy and tattooing, cauterization combined with sclerectomy, as recommended by Fuchs, excision of the apex of the cone, or finally extraction of the lens. Of Critchett's "target" operation my experience has been limited. He has himself reported good results, but stops short of perforation. There can be no doubt that perforation is not free from risk, either of wounding the lens, or of prolapse and incarceration of iris. T. Harrison Butler also reports a case where the anterior chamber remained empty for a long time. Landolt states that perforation is not followed by inconvenience and Terrien's opinion is that cauterization without perforation is no good.

The case of Nurse S. may be given at this point: She first came under my care in November, 1920. Her age was 24, general health good; her eyes had been all right up to four years previously. Vision was: right eye fingers only, left eye 6/60. She had well-marked conical cornea of both eyes. I first performed sclerectomy on the right eye with a view to establishing hypotony. This was followed by iritis, hypotony and the appearance of a small macula on the apex of the cone, which disappeared as the eye recovered. The patient made a good recovery, but the eye healed without leaving any obvious sign of fistulization and the corneal condition was in no way altered, or vision improved. A small buttonhole iridectomy was the only visible sign of anything having been done. She now returned to work, but eight months later came back, asking for further treatment as she was no better and could not do her work efficiently. Vision was: right eye less than 6/60, left eye with −7.00 6/36. My next expedient was to try the effect of performing the first stage of cataract extraction, making a large flap in the hope that a pressure bandage and post-operative astigmatism would produce a beneficial result. I was again disappointed. The eye healed normally and remained precisely as before. Next, after an interval of four weeks, I tried cauterization, endeavouring to confine myself to an area not exceeding two millimetres in size; on four separate occasions I cauterized this long-suffering nurse, perforating the cornea of set purpose three separate times; on each occasion healing occurred under a pressure bandage without any complication, the anterior chamber reforming in a few days' time. For a little while after the first cauterization with perforation she stated that sight was

definitely improved, but the good effect soon passed away, and at no time was her vision superior to 6/60. Finally, all that remained of her six operations was the small and inconspicuous iridectomy above noted and an insignificant corneal macula below and somewhat to the outer side of the pupil. You might have thought that she would have had enough by this time, but no, she again asked me to do something more. After careful consideration I decided to extract the right lens and had arranged to admit her, but at the last moment she fell ill with pleurisy, and I heard no more until recently, when I received a letter dated December 8, 1922, with the information that she is now a patient in a sanatorium, that her sight is no better, but that she hopes it will improve as she gets stronger. In her case I think it is fair to assume that ill-health has militated, at any rate partly, against a successful operative result.

Terrien states that cauterization with perforation is the best procedure. The perforation should be made through the apex of the cone and the corneal bulge is replaced by a flat opaque scar. Later on optical iridectomy and tattooing may be needed. Vision in one of his cases was improved from 1/10 to 1/2. In my own case, however, perforation on three occasions was a complete failure, and every time the risk was incurred of serious complications. The resulting leucoma must often, moreover, be a serious drawback, it had a very unsightly appearance in one of my cases operated on some years ago, and after such an experience as that just related I shall be very reluctant again to try cauterization if there is anything better to be done.

But is there? I think so, and the case about to be related is a partial answer to the question. It is as follows:—

Mrs. L., aged 49, whose sister, as in Nurse S.'s case, also suffers from keratoconus but not so severely, first consulted me on June 14, 1921. Her sight had been very good up to 12 years previously, and had been gradually failing since. She had never worn glasses. Recently she had been so much handicapped that she was unable to go about by herself. She had suffered from exophthalmic goitre some years previously, but had quite recovered and was in good health. On examination she had conical cornea in both eyes, with a small opacity on the apex of the right. Well-marked peripheral opacities were present in both lenses. Vision was less than 6/60, and could not be improved by glasses. I tried the effect of general treatment at first, but as there was no improvement a year later, and on account of the lenticular opacities, I determined to perform simple extraction. This was done accordingly on August 2 last by my usual method of extraction under a subconjunctival bridge. This has proved, in my experience, a safe

and reliable procedure in cases of simple extraction. The patient made a good recovery and was discharged from hospital nine days after operation with a fair amount of after cataract. This was not unexpected as the lens was almost transparent throughout. She was readmitted for discission on September 25, and I endeavoured with partial success to make an incision in the capsule about a millimetre broad and half a centimetre long in the vertical diameter. This incision was based upon the well-established fact that vision in keratoconus is improved either by narrowing the pupil, or by making it resemble a stenopoeic slit. The honour of applying this principle to keratoconus is due to Mr. G. Critchett, and was embodied by him in the operation of iridodesis or, as the French call it, iridencleisis. The operation was performed by making a small opening at the limbus with a broad needle and snaring the iris as it is withdrawn with a loop of fine silk. One end of the suture was left long in case the iris should slip back into the anterior chamber again! The loop was removed on the second or third day. Eight days later a second iridodesis might be done opposite the first if considered necessary, a linear pupil being thus formed. Vision was then found to be improved. Soelberg Wells, in describing the operation, states that iritis or irido-cyclitis may occasionally be met with, but that for his part he had never met with it. The operation was performed for choice at the extremities of the vertical diameter of the cornea, as the slit was then less disfiguring and gave better vision as it was partly hidden by the lids. Of course, in my case there is no question of any interference with the iris, the idea is merely imitated by making a narrow vertical opening in the capsule. Since the operation the slit has gaped a little owing to elastic retraction, and is now about two millimetres in width. The patient was discharged a few days after discission with a perfectly transparent cornea and is now wearing −5.00 D. sphere with −1.00 cyl. axis horizontal, with which she can read, though with a little difficulty, 6/24. I think this may be regarded as a very satisfactory result; there is no disfiguring leucoma or iridectomy coloboma, such as there might have been if the cautery had been used. She herself is satisfied with the result and can see better than she has done for a long time past, she is now able to get about by herself, and altogether the improvement is material. She is to undergo a similar operation on the other eye shortly, and I shall be satisfied if a similar result is obtained. From the correcting glass one can deduce the fact that the antecedent myopia must have been about 32 dioptres.

One case is not much to go upon and in Mrs. L.'s the visual acuity is not high, but the method seems to me to be rational, simple, and devoid of danger; it causes no disfigurement and from start to finish can be done in a reasonable time. I venture to

submit, therefore, that it deserves a trial, either at the outset, or when other means have proved a failure.

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BLUE CATARACT

BY

R. P. RATNAKER, D.Ch.O.(Liverpool)

LATE RESIDENT SURGICAL OFFICER, MANCHESTER ROYAL EYE HOSPITAL

SINCE Koyanagi reported his three cases of blue cataract in the March number of the *Nippon Ganki Zasshi* of 1917, I have come across two such cases at the Royal Eye Hospital, Manchester, which I consider worth while reporting, as this form of cataract is likely to be overlooked in a large ophthalmic clinic unless each and every eye is carefully examined by oblique illumination.

This form of cataract shows no black spots against the red background of the fundus; on the other hand the opacities do not at all interfere with a clear view of the fundus, either by direct or by indirect ophthalmoscopic examination. But by oblique illumination fine greenish blue dots are seen scattered all over in the lens according to the stage of the disease, except at the extreme periphery.

Hess[1] explains the appearance of blue colour in this form of cataract by the observation of Lord Rayleigh who found that in an opalescent medium containing innumerable fine particles of a different refractive index, the dispersion of light is inversely proportional to the fourth power of its wave length. Hence the parts of the crystalline lens presenting such irregularities of refractive index caused the dispersion chiefly of short wave light, green, blue, and purple. By such diffuse light, they are rendered visible, blending into blue the colour of such spots as seen by daylight, or green as seen by yellow artificial light.

It is of practical importance to know that this form of partial cataract generally appears early in life, or, according to some, is congenital, interferes comparatively little with vision and progresses very slowly. It is capable of being removed in toto, and is particularly fitted for extraction with round pupil.[2]

The following are the notes of the cases:—

CASE I. Alfred M., printer, aet. 40, came to Dr. J. G. Clegg

as an out-patient in May, 1918, for glasses; eyes weak since birth, no pain either in the eyes or forehead; the movements of the eyeballs, the conjunctiva, cornea, and iris were all normal. Pupils regular, active and medium in size. R.V.=6/0 $\bar{c}$. −8 sph. with −1 cyl. ax. horizontal=6/36. L.V.=6/60 $\bar{c}$. −3.5 sph. with −1.5 cyl. ax. 40° down and out=6/24 pt. Both eyes together=6/18 pt.

The diminished vision in this case was chiefly due to refractive error.

On focal illumination a few bluish dots were seen in the lens in the pupillary region; on dilatation of the pupils many more of these dots were brought into view.The fundus could easily be seen with indirect ophthalmoscopic examination, and except a crescent of the disc nothing abnormal was seen in either eye. There were brown patches of pigment in the irides which were of congenital origin. Besides the innumerable bluish punctate dots, some of which were conglomerated together in the centre in a Y-shaped or triangular patch (R. eye), which could be resolved into fine dots by the loupe, there were a few greyish dots nearer the periphery, which were larger in size than the blue ones. It presented a very pretty picture.

The patient had no albumin or sugar in the urine; fields of vision normal.

The patient came for re-examination after three months; no change in the eye condition or in sight was found. A third examination three months later showed no change either.

CASE II. Mrs. Maud C., munition worker, aet. 28, came to Dr. H. H. McNabb as an out-patient in August, 1918, for a foreign body in her right eye. On oblique illumination blue dots were seen in both the lenses. She did not complain of dimness of vision, but said that her eyes were slightly weak and she did not want any glasses. The eyes were perfectly normal externally, and the fundi were also normal.

R.V.=6/12 pt. $\bar{c}$. +2 sph. with +0.5 cyl. 30° down and out =6/6 ptly. and J. 2.

L.V.=6/18 $\bar{c}$. +2.5 sph. with +0.5 cyl. 30° down and out= 6/12 ptly. and J. 4.

After dilatation of the pupils a larger number of blue dots were exposed, but the periphery of the lenses was quite clear. There were no greyish dots at the periphery in this case as in the first one. The fundus could easily be seen both by direct and indirect ophthalmoscopic examination, and was found to be normal. The dots in this case also had a tendency to coalesce in the pupillary region. No sugar or albumin in the urine. Unfortunately the patient having changed her address could not be traced, and so no re-examination was made.

I am greatly indebted to Drs. J. Gray Clegg and H. H. McNabb for permission to publish these cases.

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THE THIRD DIMENSION IN MONOCULAR VISION

BY

C. H. BRYANT, F.R.C.S.

HOVE

OWING to the fact that the retina is a cupped surface, every part of which is approximately at the focus of the lens, a fairly clear picture is obtained of all objects in the field surrounding the small part of it falling on the macula from the object which is used for fixation. There is thus formed a series of images at different planes on the retinal cup improving in definition as they approach the point of fixation. The depth of the landscape viewed is then estimated by the comparison of these images in the light of past experience. An experimental proof of this is readily made by viewing the landscape through a series of opaque tubes of increasing calibre. In proportion as the field viewed is made more extensive and more objects are seen in it so does the sense of depth become more evident. In this way animals possessing only monocular vision must be able to see objects in relief and not flat, as the depth of the picture can be estimated almost as well with one eye as with two.

I have often observed with interest the movements of a friend who has lost one eye from glaucoma and, although he has normal visual acuity in the remaining eye, has an extremely limited field of vision. He obviously has no idea of the relative position of objects, and has to grope his way about. This is, of course, due to the limitation of the field and not to the fact that there is only one eye. We are all familiar with the fact that persons who have only one eye can play a good game of tennis, cricket, or billiards, and are excellent game shots, in all of which sports an accurate knowledge of the relative position of objects is essential.

Binocular, or rather stereoscopic, vision can be of little or no use at a distance of more than a few yards in the estimation of the relative position of objects, since the rays of light entering the eyes are then practically parallel. The muscular sense of focussing is also of little use. Parallactic movement is of the greatest value in giving the idea of depth. Birds may be noticed to make use of this as they move their heads from side to side and even up and down when looking intently at an object.

ANNOTATIONS

State Recognition for Sight-Testing Opticians

The organs of the optical trade having had time by now to read and digest the report of the Council of British Ophthalmologists, together with the annotations contained in some of the leading medical journals, have returned to the charge in full force. The *Dioptric Bulletin* for August, 1922, gives extracts from the final report of the Departmental Committee on the Causes and Prevention of Blindness (Ministry of Health), as well as excerpts from the report issued to the general Press by the Council of British Ophthalmologists, together with the historical appendix; there is also an editorial in which occurs the statement that " the Committee (Ministry of Health) with its witnesses was composed almost entirely of ophthalmic surgeons and medical men, and that the sprinkling of laymen was almost infinitesimal. Although the two leading societies offered to give evidence, their offer was not taken advantage of, the result being that a purely *ex parte* statement was drawn up by this Committee, giving the opinion that medical men only were competent to test sight and that opticians as such were incompetent."

The Editor of the *Dioptric Bulletin* holds that it is necessary for the Committee of the British Optical Association appointed by the Council to consider the question, to act quickly, and in order to stimulate such action, prizes of £10, £5, and £1 are offered for the three best replies to the final report of the Departmental Committee. The Editor deems it unnecessary at the present time to make any reply to " that of the *British Medical Journal* or to the Council of British Ophthalmologists, which can be dealt with in their own proper turn." These prizes are open to all and sundry, and our readers will be gratified to learn that they can, if they desire, compete for them.

The same journal in its last issue for 1922 prints a letter in answer to the " recent attacks of the Council of British Ophthalmologists, asking why the ordinary medical practitioners consult qualified opticians, and send their wives and families, and also their patients to them "; the writer complains of the illegible writing of ophthalmic surgeons, and of the fact that they do not adopt a standard notation for axes of cylinders; " abundant cases could be brought forward of ametropes being sent by opticians to ophthalmic surgeons for medical treatment and only getting the refraction corrected." " It is ridiculous to suggest that a knowledge of, say, the earlier symptoms of scarlet fever is necessary to correct a case of hypermetropic astigmatism, and it is decidedly

unfair to lead anyone to believe that qualified opticians treat eye diseases, or that they give the public the impression that they are fully qualified medical practitioners." This letter ends with a bombastic paragraph castigating the Council of British Ophthalmologists as obstructionists, "preventing the qualified optician from becoming a better man." A short letter follows this, in which the writer asks the Association to try and make its members adopt a more professional attitude, and advocating that the advertisement "sight tested free" be forbidden.

The *Optician and Scientific Instrument Maker* has a leading article on the same lines as the *Dioptric Bulletin*.

We are entirely unable to follow the organs of the optical trade in this matter; we fail to see why State recognition should make the opticians better workmen than they are. If, on the other hand, the opticians think that the possession of a State diploma will enable them to charge their clients for their advice, as well as for the spectacles, why cannot they be honest and say so?

We would remind them that in each case of refraction, there is a personal element as well as an optical element; that glasses are made for the patient and not the patient for the glasses, and that it is absurd to treat a human being as if he or she was a mere optical instrument. We believe that the Council of British Ophthalmologists was entirely actuated, in their considered report, by a sense of public duty, in a matter which has a very distinct bearing on the public health, and we do not see that the two leading societies have any right of grievance at not being called upon to give evidence before the Departmental Committee, which was appointed to consider the causes and prevention of blindness, neither of which subjects, it seems to us, come within the purview of the optical trade.

Should the optical trade succeed in obtaining State recognition, it is obvious that a very large number of their clients will assume that the optician is competent to advise, not only what glasses should be worn, but also in all matters connected with the eye. We have never accused the opticians of treating ophthalmic diseases, but we may remind them that good sight is perfectly compatible with the presence of such serious conditions as chronic glaucoma and optic neuritis, the first of which diseases accounts for a fair percentage of blindness in middle-aged and elderly people; with conditions as they are at present, the optician who is brought into the Law Courts by a patient, who has gone blind while wearing his glasses, has a strong position. He will be the first in such a case to affirm that he is here to sell a pair of glasses and not to advise about diseases of the eye, and the Judge and jury would probably take the common-sense view that

the patient, under these circumstances, has only himself to blame for his lamentable condition. Will it not be otherwise, if the trade succeed in obtaining their charter?

Medical Students and Ophthalmology

It is little wonder that the vexed question of what the medical student should be taught of ophthalmology has aroused interest far from these shores. The *Archives of Ophthalmology* recently printed a weighty paper by Dr. Gordon M. Byers, of Montreal, giving his views upon the subject. Post-graduate instruction does not offer the same difficulties as pre-graduate instruction, mainly, perhaps, because it falls mainly to teachers in the specialities for solution, while under-graduate studies in any one subject are but a single factor in a much larger problem, in which workers in all branches of medicine are interested. Nobody may at this day hope to master all medical knowledge during his studentship, whatever may have been the case once. The foremost place must be assigned to disorders that involve the issues of life and death, and then to those that lead to complete and permanent disablement. Lastly, come the disorders which are neither menacing nor rare, but of importance since they are common. Judged from this utilitarian standpoint how many eye problems fall into these several groups? Among the major questions are intraocular tumours, malignant growths on and about the eye, wounds and injuries of the orbit, orbital cellulitis, and osteitis from extension or metastasis; the student should be able to distinguish between the various disorders of which proptosis is the most striking sign. Diseases that are danger signals include optic neuritis, choked disc, retinitis or choroiditis, palsies of the muscles of the eye, and visual disturbances expressive of disease in the optic tract. Disorders that threaten disablement include purulent ophthalmia, trachoma, diphtheria of the conjunctiva, wounds, injuries and burns of the eye. There is demanded a fair knowledge of refraction, ophthalmoscopy, and perimetry in the functional examination of the eye. Byers appears to think that by a re-arrangement of the present curriculum and by the introduction of more effective methods of teaching and study, room could be made for the necessary amount of ophthalmology, which could be given in four months' whole time work, provided the student had had a year of active work in general surgery. Finally, he raises a strong plea for the continued retention of ophthalmology in the general curriculum of medicine. It is clearly impossible that a man could intelligently practise in any special field without a knowledge of medicine and surgery as a whole.

ANNUAL CONGRESS OF THE OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM

THE Eleventh Annual Congress of the Society was held at the Royal Society of Medicine, 1, Wimpole Street, on Thursday, Friday, and Saturday, April 26-28, 1923.

The President, Dr. A. Maitland Ramsay, was in the chair. The attendance was the largest on record since the Congress has become annual. The President was well supported by a large number of Scottish members, and many prominent provincial members were present. Last, but not least, the Society were pleased to welcome their Bowman lecturer in the person of Dr. G. E. de Schweinitz, and Drs. J. Moores Ball and G. H. Simmons from the United States.

Dr. Maitland Ramsay, after acknowledging the honour done him in electing him to the office of President, said his work had dealt with the familiar and the commonplace, rather than with the strange and unusual, and that his leanings had always been towards the clinical side of ophthalmology. In his address he spoke of the debt that general medicine owed to this speciality. He said that ophthalmology not only had relations with every branch of medicine and surgery, but that it was the best training in exact observation in the whole medical curriculum. He cited several striking instances where the ophthalmic findings had preceded the other symptoms, and had assisted the general physician.

In conclusion, he drew a very interesting analogy between the ciliary and cardiac muscles, and certain of their affections.

The opening paper was read by Mr. E. TREACHER COLLINS, "*On the Aetiolgy of Angioid Streaks in the Fundus Oculi.*" He showed that the arrangement of the streaks corresponded closely to that of the short posterior ciliary arteries round the optic disc and that they were obviously haemorrhagic in origin. He regarded them as due to haematoidin and haemosiderin in subchoroidal haemorrhages. The paper was illustrated with lantern slides.

This was followed by two papers on the same subject, viz.: "A Series of Consecutive Cases of Cataract Extraction by Barraquer's Method," by Mr. R. AFFLECK GREEVES and Mr. R. FOSTER MOORE.

Mr. Greeves had dealt with 51 lenses in 49 patients and Mr. Foster Moore with 38 cases. The papers were written independently and the results had not been compared before the meeting. Mr. Greeves had used the scoop in 13 cases and in 3 there had been loss of vitreous. Mr. Foster Moore had failed to remove the lens by the method in 11 cases, in 4 he had resort to the scoop, and in 9 there was some vitreous loss, though in some of the cases

the loss was very slight. Some of the cases in both series were done before the vacuum arrangements were entirely satisfactory. In Mr. Greeves' opinion the results of a successful intracapsular operation left nothing to be desired, but he thought the method had shown itself less certain in results than extraction by the ordinary methods employed. Mr. Foster Moore also showed the modified suction cataract extraction described in the last issue of this journal. In his opinion the considerable element of danger in the Barraquer method rendered it inferior to the older methods for general use, but it had distinct advantages for immature cataracts and sclerosed lenses.

Colonel Smith congratulated the authors on their papers, and discussed the importance of loss of vitreous, and the question whether vitreous was ever reformed. He said that up to one-third of the vitreous might be lost without interfering with the result. Mr. HEPBURN pointed out that in addition to the human factor there was also considerable risk of instrumental failure by this method. Mr. BICKERTON enquired as to the class of patient operated on, and Mr. JOHNSON TAYLOR hypothecated a personal test. Mr. FISHER said it was questionable if the operation described should be called Barraquer's operation. Mr. PATON spoke of the rocking movement after the suction apparatus was applied, and COLONEL KIRKPATRICK of the use of novocain to paralyse the orbicularis.

Mr. D. V. GIRI read a paper on " Some Observations on Intracapsular Extraction of Cataract, with the Description of a Simple Technique."

The last paper of the morning was to have been on " A Series of a Hundred Cases of Cataract Extraction removed under a Sub-Conjunctival Bridge," by Mr. CHARLES KILLICK, who was not well enough to read the paper. It was with the deepest regret that the members of the Society heard, on the last day of the Congress that he had succumbed to an attack of blood poisoning, contracted in the discharge of his professional duties.

A discussion on Disorders of the Blood and their Ophthalmological Manifestations was opened in the afternoon by Sir HUMPHRY ROLLESTON, K.C.B. (President of the Royal College of Physicians).

The disorders which he dealt with as coming within the sphere of the discussion were erythraemia, pernicious anaemia, combined and subacute degeneration of the spinal cord, aplastic anaemia, chlorosis, secondary anaemia (post-haemorrhagic) splenic anaemia of adults and splenic anaemia of infants, leukaemia (with chloroma), scurvy, purpura, and haemophilia. He made a very valuable and complete contribution to our knowledge on the subject, and one with copious references.

Sir FREDERICK ANDREWS, F.R.S., spoke first of functional disturbances, and secondly of the visible changes in the fundus as seen in diseases of the blood, and supplied their pathological explanation. He dealt with oedema, and considered the escape of fluid from the vessels in renal retinitis, etc., Oedema in general he ascribed to endothelial malnutrition. Extravasation of leucocytes, and the escape of red blood-corpuscles were described, and also the tumour formations in the leukaemias.

Mr. W. C. SOUTER opened from the point of view of the ophthalmologist, and gave a résumé of recent literature. Mr. R. R. JAMES gave his experiences of these cases at St. George's Hospital, over a period of fourteen years. He showed some interesting lantern slides, lent by Mr. GRIMSDALE.

Dr. GORDON HOLMES, Mr. RANSOM PICKARD, and Dr. C. O. HAWTHORNE, also joined in the discussion.

At 5 o'clock there was a large attendance in the Barnes Hall to hear the Bowman lecture, which was delivered by Dr. G. E. de Schweinitz (President of the American Medical Association). The subject selected was "Certain Ocular Aspects of Pituitary Body Disorders, mainly exclusive of the usual Central and Peripheral Hemiopic Field Defects."

The lecturer detailed his findings, conjointly with Dr. J. Parsons Schaeffer, professor of anatomy in the Jefferson Medical College, Philadelphia, as regards the relations of the Pituitary body in 125 bodies examined.

These anatomical relations were very clearly shown by a large number of excellent lantern slides, giving the relations of the chiasma, and the different types of diaphragma sellae.

The lecturer also showed how the circle of Willis might bring about constriction, and dealt with other possible and probable ways in which the optic nerve fibres might be involved in irregularities in the position and size of the pituitary body. He did not consider that purely mechanical causes could explain all the changes found in the cases by modern methods of scotometry, and he suggested that there was also a toxic element present. The temporary field defect he cited as occurring in pregnancy supported this strongly. He dealt with the differential diagnosis from other conditions by perimetric methods, and mentioned with regard to tabes dorsalis that this disease was not frequently associated with pituitary disease.

His experiments disproved the assertion that methyl alcohol blindness was due to a primary pituitary lesion. He entered a plea for the earlier diagnosis of these affections. When the importance of the "pituitary types of headaches (which often preceded the other symptoms by years), and the earliest appearance of field defects were more fully recognized, this was possible."

Treatment was considered, both in its surgical and medical aspects, and in the latter category he referred to the value of combining mercury with pituitary extract even in the absence of any syphilitic taint.

Attention was drawn to the fact that the X-ray findings might sometimes be quite fallacious, as considerable enlargement of the pituitary body might exist without the sella Turcica showing any enlargement.

Dr. de Schweinitz's address will take a memorable place in the calendar of Bowman lectures. It was still further enhanced by the personality and the eloquence of the lecturer.

A vote of thanks to Dr. de Schweinitz, proposed by Mr. Lawford, and seconded by Mr. Treacher Collins, was carried with acclamation.

The dinner of the Society was held at the Langham Hotel on the evening of April 26. There was a record attendance of eighty-five, including the President, the Bowman lecturer and six past Presidents.

The President proposed the health of the Society in a felicitous speech, which was responded to by Sir George Berry, M.P., in a humorous vein. Sir Anderson Crichett delighted those present by the inimitable speech with which he proposed the health of the Bowman lecturer. Dr. de Schweinitz touched a deeper note, and the eloquence and sincerity of his speech will long be remembered by those who had the privilege to be present. He thanked the Society most gracefully for their invitation, and dwelt on the good that could be accomplished by a closer co-operation of Great Britain and the United States in ophthalmology, as in other matters. Mr. Cross, in a very happy speech proposed the health of the Chairman.

On Friday morning there was another well-attended discussion on "The Diagnostic Significance of Proptosis." The opening paper was read by Mr. WILFRED TROTTER. His remarks were drawn from his own clinical experience, and he restricted them to the grosser forms of proptosis. He drew the distinction between displacement in an antero-posterior plane alone, and that combined with displacement in another direction. He considered the various causes in detail and spoke of the often insidious origin of malignant disease. Mr. J. H. FISHER gave a lucid general survey of the subject from a clinical point of view. He said that in orbital tumor the X-ray findings were frequently negative. He enumerated the causes of haemorrhages into the orbit which might occur without accident. Congenital dermoid was the most frequent cyst of the orbit. In all cases with inflammatory manifestations examination should be made for paralysis of the nerves in the floor and outer wall of the cavernous

tissues. The assistance of the neurologist or rhinologist might be needed. The other opener of the discussion was Dr. Angus MacGillivray. He advocated the routine use of the exophthalmometer in these cases and enumerated the main causes of proptosis which the ophthalmic surgeon might be called upon to treat. And, he said, that proptosis should always be regarded as a "danger signal" of grave import. Mr. DOYNE detailed some interesting cases. Dr. TRAQUAIR spoke of arterio-venous aneurysm in particular. Mr. MAYOU added a case of angioneurotic oedema as a cause, and Mr. JOHNSON-TAYLOR one of organising gumma. Mr. Foster Moore spoke on the cause of proptosis in Graves' disease. Messrs. ROPER, HARRISON-BUTLER, INGLIS POLLOCK, R. B. HIRD, HEALY, CRIDLAND, and A. GREENE also took part in the discussion.

Mr. W. T. HOLMES SPICER read an interesting paper on "Secondary Corneal Opacities," a subject peculiarly his own, and illustrated by his own drawings.

In the afternoon the clinical meeting was held at the London Hospital, where a number of interesting cases were shown.

The following papers were read on Friday evening:

Mr. HUMPHREY NEAME and Dr. W. WALLACE, "A Case of Retinitis Proliferans following Gunshot Wound of the Orbit, Rupture of the Choroid and Irido-Cyclitis; Enucleation, Clinical and Pathological Reports." Mr. Neame showed sections and Dr. Wallace his own drawings of the fundus.

Mr. F. A. ROSS and Dr. SHEPHEARD-WALWYN, "A Case of Mikulicz's Disease," with illustrations, and the pathological report.

Mr. B. T. LANG a demonstration on "The Unobstructed Field in Perimetry," and showed the fields obtained by fixation at 30°, to the nasal or temporal side of the central point.

Mr. JOHN ROWAN, "A Case of Intraocular Tumour presenting some Unusual Features," with specimen.

Mr. G. F. ALEXANDER on "Measurement of the Diameters of the Cornea and Pupil, and the Inter-pupillary Distance" in which he described the apparatus employed.

Mr. BASIL GRAVES, a paper and demonstration on "The Practical Value of the Binocular Microscope and Special Methods of Illumination." This being a subject on which the author has done a good deal of work, he made certain suggestions for a more exact nomenclature.

The session terminated with a paper on "Blue Sclerotics," by Mr. LESLIE BUCHANAN.

The business meeting was held at 9.30 a.m. on the Saturday morning. Dr. ANGUS MACGILLIVRAY read a paper on "Enucleation of the Eyeball under Local Anaesthesia," advocating this procedure and describing the technique he employs.

The paper produced a number of interesting observations on the methods in use from Sir ANDERSON CRITCHETT, Messrs. LEASK, TREACHER COLLINS, ERNEST CLARKE, TRAQUAIR, ROPER, JOHNSON TAYLOR, and Dr. DE SCHWEINITZ. The latter at Dr. MACGILLIVRAY'S request, gave the usual practice with regard to anaesthesia in these cases in the United States.

Mr. LESLIE BUCHANAN read a paper on " A New Subjective Visual Phenomenon connected with Neuralgia." The phenomenon in question was a temporary central blue vision unconnected with any visible fundus change and was discussed by Mr. TREACHER COLLINS and Drs. LEASK, TRAQUAIR, A. H. H. SINCLAIR, JOHNSON TAYLOR, and GEORGE MACKAY.

Mr. PERCIVAL J. HAY on " Prevailing Misconceptions concerning the Working Distance of Patients with Moderate and High Myopia after correction," with tables which showed the vision obtained and the position of election. Mr. Ernest Clarke spoke on the subject.

Mr. HUMPHREY NEAME on " Results of Further Investigations on the Passage of Arsenic into the Aqueous Humour after Intravenous Injection of Novarsenobenzol in Rabbits."

Mr. INGLIS POLLOCK on " A Case of Pseudo-glioma," with pathological specimen, and the concluding paper was by Mr. G. F. ALEXANDER on " A Theorem generalizing the Optical Problems of Ophthalmoscopy and Skiascopy."

At the conclusion of the Congress Dr. de Schweinitz made a farewell speech in which he said it was his dream that we might one day hold a combined meeting with our colleagues in the United States of America.

ABSTRACTS

I.—THE DIAGNOSTIC VALUE OF HEMIANOPSIA

Williamson, R. T. (Manchester).—The recognition of hemianopsia in general practice and its diagnostic importance. *Practitioner*, April, 1923.

Williamson prefers the word hemianopsia to its synonyms hemiopia or hemianopia, since the latter are sometimes applied to the retina and sometimes to the field of vision, so that unless one knows in what sense these terms are used, confusion is liable to arise. The word hemianopsia, however, is applied only to the field of vision. The author emphasizes the value of hemianopsia in

diagnosis, and points out that in private practice or at the patient's home the fields of vision are seldom tested, although that may be done without the use of a perimeter. In some cases of cerebral thrombosis or embolism or haemorrhage, although general cerebral symptoms have been noted at first, no indication of hemiplegia can be found subsequently, and in such case the finding of hemianopsia settles the question of a localized brain lesion. Williamson describes three such cases. One of these is typical of all. A woman of 60 had suddenly become unconscious. Next morning, conciousness having been regained, the medical man could detect no paresis or signs of localized brain disease. The patient did not complain of any defect of sight. Williamson, who was then consulted, could find nothing to account for the seizure. After leaving the patient's bedside he remembered that he had not tested the fields of vision. He returned, and on testing found a left-sided homonymous hemianopsia, and diagnosed the condition as one of thrombosis of the posterior cerebral artery. He mentions other cases where he has found hemianopsia of service as an indication of localized brain affection. Hemianopsia is of special value when cerebral symptoms have occurred suddenly, and recovery has apparently followed, and yet no evidence of localized organic lesion can at first be detected.

Williamson describes the rough method of testing the visual field known to every ophthalmic surgeon. For the knowledge of a less familiar method he has to thank Oppenheim (*Lehrbuch der Nervenkrankheiten*, 1898). The preliminaries are similar to those of the better known test, and two objects, as a penny and a pencil, are held between the patient's and the examiner's eye. They are held a short distance apart, one in each half of the field of vision. What the examiner sees with his one eye the patient should also see with his one eye. During the examination the patient's eye should of course be kept constantly fixed on the physician's eye. This method, according to Williamson, should always be used. S.S.

II.—REMEDIES

(1) **Vialleton (Lyon).—A new formula for subconjunctival injections: saccharinated methylene blue. (Sur une formule nouvelle pour injections sous-conjonctivales: le bleu de méthylène saccharosé.)** *La Clin. Ophtal.*, October, 1921.

(1) **Vialleton's** object is not so much to insist on the value of methylene blue, which he considers already proved, as to show how

the extreme pain caused by subconjunctival injections of this substance can be, he says, practically abolished. The following is the formula, which, owing, as it turns out, to a printer's error in the original the reviewer has had confirmed by the author :—

Methylene blue, 0.20 grammes; cane sugar, 5.00 grammes; distilled water, 100.00 grammes. To be divided into 50 sealed ampoules, each of which contains 2 per 1,000 of methylene blue, and has a bulk of 2 cubic centimetres.

On condition that the injection is made slowly it is not painful, and is well tolerated even by children.

In a footnote the author points out that prior to the war methylene blue of great purity could be obtained from Germany. It was much less painful in use than the present commercial varieties.

ERNEST THOMSON.

(2) **Darier, A.—For and against injections of milk.** (**Pour et contre les injections de lait.**) *La Clin. Ophtal.*, November, 1921.

(2) Between 1916 and the present time a great deal has appeared in continental literature regarding the employment of injections of sterilized milk in acute infections. During this period no fewer than thirty-six articles or references to articles have appeared in *La Clinique Ophtalmologique* alone. A number of these articles have been highly laudatory and enthusiastic in character. Some of them have already been abstracted in the *British Journal of Ophthalmology*. In the present article **Darier** takes a more critical attitude than some of the previous writers. In fact it may very nearly be said that he seems somewhat to water down the milk treatment. Apparently he regards the method merely as a more or less useful adjuvant rather than as a specific, and insists that other and older-standing methods be employed at the same time, namely, those proper to the particular disease, such as antisyphilitic and antituberculous remedies, and those intended to stiffen the resistance of the organism such as specific or paraspecific sera. Nevertheless, Darier is quite favourably disposed towards the milk treatment as shown by the following words :—" Injections of milk like those of typhoid vaccine act as it were by active aspecific immunization with an always well-marked febrile reaction, while specific or paraspecific sera act by passive immunization, bringing into the diseased organism elements of defence and hormones elaborated by inoculated animals. So that not only must reactional therapeusis not replace serum-therapy, but the two methods actually form a very advantageous and complete combination. . . . The two methods can be and should be combined and alternated."

ERNEST THOMSON.

(3) **El Rasheed Bey, A. F.—A summer visit to the Vienna and Berlin Ophthalmic Clinic in 1921.** *Bull. Ophthal. Soc. Egypt*, p. 27, 1922.

(3) The author has much to say on milk injections in ophthalmology, as practised in Vienna and Berlin. Fresh milk is boiled for three minutes, and as soon as it cools to body temperature 2 to 10 c.c. are injected slowly into the muscles of the buttocks or, in babies, under the skin or fat in the gluteal region. General rise in temperature, which reaches its height 6 to 8 hours later, averages 39.5° C. S.S.

(4) **Sohby Bey.—Four cases of pseudo-membranous conjunctivitis, with threatening affection of the cornea in three, treated with anti-diphtheritic serum.** *Bull. Ophthal. Soc. Egypt*, p. 39, 1922.

(4) **Sohby Bey** reports four anomalous cases of pseudo-membranous conjunctivitis cured by the injection of anti-diphtheritic serum.

S.S.

(5) **Tewfik, M. (Sohag).—Some notes about milk injections.** *Bull. Ophth. Soc., Egypt*, p. 44, 1922.

(5) **Tewfik** has tried injections of milk, and describes the results in three cases. The first of gonorrhoeal membranous ophthalmia in a child a year old, had six injections (4 to 12 c.c. of milk) and recovered, although the corneae were very hazy when first seen. No other treatment except eusol 2.5 per cent. The second case was one of abscess of the orbit opened in the upper fornix. Three injections of milk (5, 8, and 10 c.c.). Recovery. Thirdly, dendritic ulcer in a child. This became worse despite treatment. Five injections of milk (5 c.c. to 18 c.c.). Ulcer healed. In no case did the general reaction exceed 38.3°C. Tewfik prefers goat's or sheep's milk which is obtained fresh and boiled from 3 to 4 minutes, and when it has cooled down to body temperature, is skimmed of fat and slowly injected into the muscles. The largest dose administered by Tewfik was 25 c.c.

S.S.

(6) **Kamel, M.—Treatment of purulent ophthalmia and other special cases of trachoma by 5 per cent. solution of silver nitrate.** *Bull. Ophth. Soc. Egypt*, p. 66, 1922.

(6) **Kamel** advises the use of a 5 per cent. solution of silver nitrate, neutralized with salt solution 5 per cent., in purulent ophthalmia with clear cornea, cases of purulent ophthalmia which resist the ordinary treatment, some cases of severe trachoma, and obstinate ectropion in children.

S.S.

(7) **Gourfein, D. (Geneva.)—The efficacy of tartro-bismuthate of potassium and sodium in the treatment of syphilitic ocular affections. (L'efficacité du tartro-bismuthate de potassium et de sodium dans le traitement des affections oculaires d'origine luétique.)** *Revue Général d'Ophtal.*, January, 1922.

(7) In this short article **Gourfein,** who is Professor of Ophthalmology at Geneva, after noting the danger to the optic nerve of the arsenical preparations, relates two cases treated by intramuscular injections of tartro-bismuthate of potassium and sodium. The first case, in a man aged 27, was frankly syphilitic with triple plus Wassermann. The patient was suffering from severe iritis or irido-cyclitis, with hypopyon. Improvement began after the first injection of three cubic centimetres, with atropin locally. After six injections spread over a period of one month the patient was discharged with V.A.=5/5. After the third injection the Wassermann was slightly positive, and after the sixth it was " doubtful." Blood examination showed that the injection caused an increase of lymphocytes. Examination of the urine revealed that the elimination of bismuth commences four hours after the injection and is complete in eight hours.

The second case was that of a female, aged 40 years, with negative Wassermann, but in whom the history of fatal general paralysis in the husband and the presence of stigmata in the only child led Gourfein to diagnose syphilis as the cause of paralysis of the superior oblique for which the patient had consulted him. Mercurial frictions and galvanism were tried unsuccessfully, and then the bismuth injections in oily suspension were commenced. Six injections of three cubic centimetres were given at about three-day intervals, at the end of which period the double vision had disappeared; nor did it return. In this case also there was lymphocyte increase as the result of injection, but, whereas in the first case there was no febrile reaction, in the second the temperature rose to 39° C after the third injection, but not after subsequent ones. The future only can show, says Gourfein, whether this treatment realizes the much-wished-for *therapia sterilans magna.*

ERNEST THOMSON.

(8) **Bargy, Dr. (Médicin-major des troupes coloniales.)—Injections of milk in more than 3,000 patients. (Les injections de lait sur plus de 3,000 malades.)** *La Clin. Ophtal.*, February, 1922.

(8) **Bargy,** of the French colonial service in the Province of Tonkin, has at Hanoï probably broken the clinical record in the matter of injections of sterilized milk. It must surely be admitted that an observer who has used these injections in more than 3,000

cases has good authority to record his results. It must be said in the first place that, according to the writer's experience, no fewer than 98.76 per cent. of hospital patients at Hanoï suffer from trachoma, active or extinct. Therefore the results deal mainly with diseases of the anterior segment of the eye. Only nine cases of disease of the posterior segment were treated, so that Bargy is unable to come to any conclusion as to the efficacy of the treatment in these. After giving particulars of 24 cases of disease of the anterior segment in detail (conjunctivitis in various forms, trachoma, iritis, hypopyon ulcer) and describing the method of application, Bargy comes to the following conclusions regarding parenteral injections of milk in disease of the anterior segment of the eye:—(1) The effect is remarkable, especially in acute cases. (2) The principal effect is to abolish pain and to dry up secretion. (3) At the same time inflammatory phenomena are lessened and then disappear. The more the disease is recent and acute the more rapid is the effect. (4) These injections are not a panacea, but a valuable adjuvant, especially in drying up a suppuration which threatens the cornea and constitutes the source of contagion. Whence the prophylactic effect in cases of conjunctivitis, which can be utilized in the pre-operative disinfection of the conjunctival cul-de-sac.

ERNEST THOMSON.

(9) **Elewaut, Dr.—Dmégon in the treatment of gonococcic conjunctivitis.** (**Le Dmègon dans le traitement de la conjonctivite gonococcique.**) *La Clin. Ophtal.*, March, 1922.

(9) Dmégon is the antigonococcic vaccine of Nicolle and Blaizot. For the history of this vaccine reference may be made to back numbers of this journal, and also of the *Ophthalmoscope*, and more particularly to the abstract on page 182 of this journal for 1919. In the latter the meaning of the nomenclature adopted by Nicolle and Blaizot is explained.

Elewaut says that at the meeting of the Société française d'Ophtalmologie at Paris on January 15 of this year (1922) Constantinescu communicated his results with the polymicrobic serum of Stérian of Bucharest. This serum, according to Constantinescu, is to be considered as much a specific for gonorrhoeal conjunctivitis as is antidiphtheritic serum for diphtheria. Elewaut, however, was unable to obtain Stérian's serum and employed dmégon instead, in four cases of gonorrhoeal conjunctivitis.

The following are the principal points about the cases:-

Case 1. A sailor. Complete cure after 4 injections of 0.5 cubic centimetre of dmégon. Duration of treatment 7 days.

Case 2. Infant 8 months. Cure after 4 injections of 0.25 cubic

centimetre each. Duration of treatment 10 days. *Case* 3. Infant 15 days. Four injections of 0.25 cubic centimetre each caused disappearance of inflammatory symptoms after a mixed treatment (other drugs used as well as dmégon) of 10 days' duration. The child was not again seen in order to confirm the cure by absence of gonococci. *Case* 4. Infant 15 days. Five injection of 0.5 cubic centimetre each. Cure after 10 days.

In none of the cases was there corneal ulceration to begin with, and in none did it appear. The inflammatory symptoms and the secretion rapidly disappeared, and the analgesic action of the vaccine was marked. There were no toxic symptoms, although the dose for infants was considered high. The author points out that, while Stérian's serum is specially painful in application, dmégon is painless.

ERNEST THOMSON.

(10) **Gemblath (Paris).—Treatment of trachoma by subconjunctival injections of mercury cyanide. (Traitement du trachome par les injections sous-conjonctivales de cyanure de mercure.)** International Congress of Ophthalmology, Washington, D.C., April, 1922.

(10) After local anaesthesia by 4 per cent. cocain and the administration of one or two doses of aspirin, 0.5 gramme, an injection is made beneath the ocular conjunctiva of a mixture of half mercury cyanide, 1/1000 and 2/3 of novocain 1/50 with adrenalin. A dressing is applied to the eye for 2 to 4 hours. In case of pain 0.5 gramme of aspirin may be given two hours after the operation. One, two, or three injections are made according to the needs of the case. The injections are separated by a distance of a week.

S.S.

(11) **Estrada, Antonio Torres (Mexico).—Mercurial preparations and salvarsan and its derivatives in the treatment of grave eczematous conjunctivitis and keratitis. (Preparaciones mercuriales y salvarsan, y sus derivados en el tratamiento de eczema grave conjuntivitis y de queratitis.)** International Congress of Ophthalmology, Washington, D.C., April, 1922.

(11) **Estrada** believes that many cases of serious eczematous conjunctivitis and keratitis are caused by syphilis, and that mercury introduced into the organism has a favourable action upon the diseases in question. He has satisfied himself that the derivatives of salvarsan were superior to mercury.

S.S.

(12) **Renshaw, Arnold (Manchester).—The effects of direct instillation of Novoarsenobillon in the conjunctival sac in resistant cases of congenital syphilitic interstitial keratitis.** International Congress of Ophthalmology, Washington, D.C., April, 1922.

(12) **Renshaw** has found that 1 per cent. of novoarsenobillon instilled into the eye at intervals of 7 to 14 days over a period of some months caused considerable improvement in cases of congenital syphilitic insterstitial keratitis. Before he applied it to the human eye Renshaw satisfied himself that a 1 per cent. solution of arsenobillon was devoid of irritating action when applied to the eyes of rabbits.

S.S.

(13) **Werdenberg, Edouard (Davos).—Ocular tuberculosis considered in accordance with recent researches on tuberculosis. La tuberculose oculaire jugée d'après les récentes recherches sur la tuberculose.)** *Revue Gén. d'Ophtal.*, August, 1922.

(13) The greater part of **Werdenberg's** article is too technically biological to be reduced to abstract form, but the conclusions come to are easily appreciable. The studies upon which they are founded must be read in the original. The conclusions are as follow:—The action of tuberculin may be useful or harmful. A specific treatment of ocular tuberculosis may be indicated when one has taken into account the three following factors. (*a*) Examination of the eye, in which the anatomico-pathological type of the tuberculosis is considered. (*b*) General clinical examination. (*c*) Investigation of the type of immunity presented by the patient.

The treatment to be undertaken will depend upon three things: the choice of method and the dosage, the method of applying, and the choice of this or that preparation of tuberculin.

ERNEST THOMSON.

(14) **Catresana (Madrid).—Autogenous vaccines in the cataract operation. (Les vaccins autogènes dans l'opération de la cataracte.)** *La Clin. Ophtal.*, November, 1922.

(14) The results obtained by **Catresana** in preventing intra-ocular infection after cataract operation in patients with a dangerous bacterial flora, seem to be of very considerable importance. He cites twenty-five cases of this kind upon whom he operated for cataract, by phacoeresis in some of them, after his course of autogenous vaccine treatment. Of these twenty-five, only two failed, and these, the author considers, because, in both, the course of vaccine treatment had been imperfectly carried out. In both only one vaccination had been performed, that one, namely,

which took place immediately before the operation. Those who will be interested in this communication are probably many, and it will be safer, in an important matter of this kind, that the original be consulted for the details. One interesting fact may here be indicated, namely, that in no case did the author cure the bacterial disease of the conjunctiva. "The patients in whom we had succeeded in avoiding posf-operative infection by this means still retained in their conjunctival secretions the same microbic agents as before the commencement of vaccine treatment." That is to say, the good results were entirely due to immunization.

ERNEST THOMSON.

(15) **Junès, E. (Sfax, Tunisia).—The treatment of trachoma by the subconjunctival infiltration of mercury cyanide. (Le Trachomthérapie par l'infiltration sous-conjonctivale de cyanure de mercure.)** *Gaz. des Hopitaux*, Feb. 20 and 22, 1923.

(15) According to **Junès**, the subconjunctival injection of mercury cyanide in trachoma originated with Cuénod in 1907 (*La Clin. Ophtal.*, 1907, No. 10). Junès is a warm advocate of the method. He anaesthetizes the conjunctiva with a mixture of cocain and adrenalin and then injects 2 c.c. of a mixture of mercury cyanide and cocain. The patient is directed to look strongly downwards and a little inwards and by means of a syringe, provided with a specially sharp point, the fluid is slowly injected beneath the conjunctiva of the supero-external quadrant of the globe between the tendons of the superior and the external recti. At first he usually employs a speculum and a pair of fixation forceps. The eye is covered with a dressing. If pain be complained of, cold or hot compresses are applied to the eye. Analgesics, as recommended by Gemblath, may also be administered. The patient may return to his occupation the third or fourth day after the injection. The eye is treated with a solution of copper sulphate (copper sulphate, 1 gramme, synthetic guaiacol, 0.20 gramme, and glycerine, 10 grammes). The injection may be repeated once or twice, or sometimes oftener. It should be made when all reaction has subsided, but a single injection may suffice. Contra-indications include cases of so-called acute trachoma and the cicatricial stage of the disease.

S.S.

(16) **Woods, Alan C. (Baltimore) and Knapp, Arnold (New York). —The therapeutic use of uveal pigment in sympathetic ophthalmia.** *Arch. of Ophth.*, Nov., 1922.

(16) In his former work on this subject Woods has emphasized two clinical points: (1) That an occurrence of immunity against

uveal pigment protects against the development of sympathetic ophthalmia; and (2) that an outbreak of sympathetic ophthalmia is dependent on an existing hypersensitivity to uveal pigment. The present is the first opportunity which **Woods** and **Knapp** have had of using uveal pigment as a means of treating the disease in the human being. Sympathetic ophthalmia occurred in a boy, aged 8 years, following a perforated corneal ulcer with prolapse of the iris after gonorrhoeal conjunctivitis. The inflammation pursued a steadily progressive course with all the symptoms of the severe type of disease. The usual methods of treatment remained without effect. The serum reaction to an antigen of uveal pigment was negative. The intradermal reaction to uveal pigment was strikingly positive, showing a marked hypersensitivity to pigment. The treatment with uveal pigment consisted in desensitization, followed by active immunization. After the latter, the serum reaction against uveal pigment became strongly positive. Synchronous with this, with one short exacerbation, the inflammation in the eye subsided, the eye became white and has remained so. The active process lasted three months, and has now remained stationary for three months. There are adhesions of the iris and capsular opacities. T.n.; V. 6/60.

A few words as to the technic of treatment. Since the pigment is denaturized by heat, the only step taken for active sterilization was the addition of tri-cresol, which is adequate to destroy all ordinary non-spore forming pathogenic organisms. A precautionary intradermal test was made with tetanus antitoxin, and this being positive the lad was desensitized with serum in the usual manner and then given 1,500 units of tetanus antitoxin. Three different dilutions of the normal pigment suspension were used, the pigment of one cow's uveal tract to 7.5 c.c. of salt solution being called " normal." The suspensions were 1/100, 1/50 and 1/10. Intradermal injections on the flexor surface of the forearm were made with each dilution. The authors at once proceeded with desensitization, making intramuscular injections into the buttock at intervals of two hours. For the first four doses 1.0 c.c., 1.5 c.c., 2.0 c.c., and 2.5 c.c. of the so-called " normal " suspension were given. For the fifth injection a suspension of twice normal strength was used, 2.5 c.c. (the equivalent of 5.0 c.c. of the normal). As to immunization during desensitization, a total of 12 c.c. of the normal suspension had been given. The equivalent of 7.5 c.c. of the normal (condensed in a bulk of 2.0 c.c.) and three days later the equivalent of 10 c.c. of the normal was given.

S. S.

III.—CORNEAL OEDEMA

Aubineau, E. (Nantes).—Corneal oedema and cholesterin excess in the blood. (Oedème cornéen et hypercholestérinémie). *Bulletins et Mémoires de la Société française d'Ophtalmologie*, 1922.

The author records two of those rare cases of fugitive oedema of the cornea, the first in a woman aged 60, who had been affected since she was 15 years old, no local treatment having proved of any avail. Apart from digestive disorders her health was good. Patches of xanthelasma were present in the eyelids, but apart from these the objective lesions were limited exclusively to the corneae.

At 8 a.m. a discrete cloudy opacity affecting both corneae could be made out; it was more marked in the centre and the periphery was clear. Vision was equal to about 1/20.

At 2 p.m. the state of oedema had diminished in intensity, and at the same time some desquamation of the corneal epithelium was observed. Vision was now 1/8 to 1/10.

In the evening at 6 p.m. the oedema was scarcely visible to the naked eye and vision was equal to 1/2.

The second case was in a male, aged 44, and was unilateral. This patient also suffered from digestive troubles. At 9 a.m. the left eye exhibited a diffuse parenchymatous opacity, seen, however, with difficulty by the naked eye. Vision 2/10.

At 2 o'clock sight had risen to 5/10, and at 6 p.m. to 9/10. As the oedema disappeared signs of corneal desquamation were evident, as in the first case. The proof of this appeared on instilling fluorescein.

In both cases an excess of cholesterin was found in the blood. The author has only found two other similar cases recorded in the literature.

He suggests as an explanation that in the morning the ocular occlusion during sleep arrests and prevents the epithelial desquamation while corneal imbibition is at its maximum from some change in the endothelium. During the day owing to the presence of the oedema and the influence of the air and lid movements the epithelium becomes detached and the cornea clears.

Vascular and other causes such as variations in tension may be put on one side. The author thinks that liver insufficiency and excess of cholesterin in the tissues and blood are the exciting factors.

Normally the barriers constituted by endothelium and epithelium prevent imbibition from attaining a degree incompatible with transparency, but if tissue cholesterin is in excess the equilibrium of the cornea is modified and its coefficient of absorption exaggerated.

CHARLES KILLICK.

IV.—ACCIDENTS CAUSED THROUGH ARSENOBENZOLS

Meyniard, J.—Accidents caused by Arsenobenzols. The responsibilities of the medical practitioner. (Accidents causés par les arsénobenzols. Responsibilitê du médecin.) *La Clin. Ophtal.*, August, 1922.

All who are engaged in the treatment of syphilis by arsenobenzols should study this Paris thesis by **Meyniard**, either in the original or in this article. It is not an ophthalmological article although appearing in an ophthalmological journal. It deals in the first place with the nature of the accidents themselves, immediate and remote, and next with the pathogenesis under the headings (1) accidents due to the patient or the disease, (2) due to the practitioner, (3) due to the medicament. Variations of the toxicity of the arsenobenzols are discussed and the author passes on to the important point as to the responsibility of the practitioner and of the manufacturer. He indicates the position of the practitioner whose technique is at fault or who is insufficiently careful in his diagnosis or in the recognition of contraindications. Advice is given as to methods of technique and precautions by which accidents may be avoided.

Note.—The title of the thesis, of which the above article in *La Clinique Ophtalmologique* appears to be a summary, is :—Contribution a l'étude des accidents causés par les arsénobenzols envisagée au point de vue médico-légal."

ERNEST THOMSON.

V.—INJURY CAUSED BY HIGH-TENSION ELECTRIC CURRENT

Spir, E. (Hamburg).—A case of eye injury caused by a high-tension electric current. (Ueber einen Fall von Starkstrom-Verletzung des Auges.) *Arch. f. Augenheilk.*, Vol. XC. 1922.

(1) A man short-circuited the electric current of 600 volts used for driving trams, the current passing through his right arm and face. Deep burns resulted with great swelling of the whole right side of the face. There was photophobia of the left eye, which was slightly injected and watery. At first there was P.L. only. After two weeks the vision of the left eye was good and that of the right eye improved. A week later a concentric contraction of each field of vision was made out. Two months from date of the

accident the eyes were quiet, there was some dust-like opacity of the right lens towards the periphery with dense striae in the neighbourhood of the posterior capsule; there were opacities in the right vitreous; the right disc was hazy and paler than the left, and in the region of the macula there was a deposit of black pigment of irregular outline and one-quarter P.D. diameter surrounded by an orange-coloured halo. The right field of vision was concentrically contracted, and had an incomplete ring scotoma and a relative central scotoma. The right vision was 6/50. In the left eye the vision was 6/8 with correction, there was some haze towards the periphery of the lens and some fine black pigmentation in the macular region.

Eight months after the accident the man was complaining of frequent headaches (mainly frontal), and that a black disc appeared in the centre of the field of vision on looking at an object for any length of time. To objective examination there was no change in either eye. The right vision was 6/36, but the letters disappeared soon after fixation; there was no definite contraction of the field, the ring scotoma was less marked, but the central scotoma was absolute. **Spir** regards the electric current itself as being responsible for the injuries, as from statements of the other workmen present at the time of the accident there was no marked flash. He points out that the lens changes are like those found in people struck by lightning, while lens changes in ophthalmia electrica are very rare. Loewenstein states that the eye is a better conductor of electricity than the rest of the body, because of its being hypertonic relatively to the blood serum, and thus explains the frequent injury to the eye observed in electrically caused injuries to the head. He says that the lens capsule offers more resistance than the fluid media, in consequence of which more heat is developed here and that this accounts for the lens opacities.

JAMES FISON.

VI.—QUININE AMAUROSIS

du Toit, Dr. J. S.—Quinine amaurosis. *South African Medical Record*, Jan. 14, 1922.

du Toit reports a case of blindness after the use of quinine for malaria in a man of 40 years. He had been resident in Rhodesia for 18 years, and was in the habit of taking from time to time five to ten grains of quinine as a precautionary measure. In June, 1918, he contracted malaria and was in hospital for three months,

during which time he was given quinine both orally and hypodermically (there is no note of the dose nor of the nature of the parasite). After he left hospital a daily dose of five to ten grains of quinine was taken. This was increased to twenty grains with the onset of a paroxysm, and the same dose was often repeated later. On September 1 a five-grain tablet was taken, and no more until 6 p.m. the following day, when, with the onset of an ague, he took thirty grains of quinine hydrochloride in tablet form. When seen a few hours later he was found to be deaf and suffering from severe vomiting. His pupils were then dilated but the sight was good. On waking two hours later he had lost all perception of light. The pupils were then semi-dilated and did not react to light. The retinal vessels were markedly contracted and in places showed a beaded appearance. A faint white haze could be seen along the course of the blood vessels. The hearing was then normal. Treatment consisted in strychnine and caffeine with prohibition of alcohol and tobacco. The total blindness lasted for seven weeks, when the sight gradually began to return, and for two months he enjoyed fairly good vision. He did not come back during this period, so that no record of fields or of vision was obtained. Five months after he was first seen the sight again failed, and when he was seen about a month later he was completely blind with optic atrophy well-marked. The retinal vessels were very narrow, especially the arteries, with white lines coursing along them. He stated that no quinine had been taken during this period.

In commenting on the case du Toit pointed out that alcohol and tobacco were used to excess, and thought that this might account for some of the unusual features of the case. There is no note of the condition of the urine, which, in view of the importance of renal insufficiency in connection with large doses of quinine, is an unfortunate omission. The subsequent discussion elicited the rarity of the affection, Professor Gunn stating that he had had under his notice between 14,000 and 15,000 cases of malaria, yet had only seen one case. This case followed one ten grain dose of quinine and recovered in a week. In view, however, of the large doses of quinine habitually employed in the treatment of malaria it is very desirable that all cases of quinine amblyopia should be reported.

E. E. H.

VII.—TOLERATION BY THE EYE OF A FRAGMENT OF GLASS

Villard, H. (Montpellier).—Toleration for sixteen months of a large intraocular fragment of glass with almost perfect preservation of sight. (Volumineux éclat de verre intra-oculaire toléré pendant seize mois avec conservation presque intégrale de la vision.) *La Clin. Ophtal.*, July, 1922.

The title of Villard's article is almost self-explanatory. The patient, a woman of 38 years, was struck on the left eye by a fragment of glass from the tip of an ampoule of iodide of ethyl which she was in the act of breaking off. She was seen within 24 hours by Villard, who found a small wound 5 or 6 mm. long in the conjunctiva and sclera, about 2 mm. from the limbus up and in. There was blood in the anterior chamber and the fundus could not be illuminated. A conjunctival flap covering the wound was immediately made. A month later V.A. was 8/10, and the fundus perfectly clear. No foreign body could be seen. Eighteen months later the patient returned. She stated that for 16 months after returning home the vision of the wounded eye had progressively improved, and had then begun to fail, till, at the date when seen for the second time, it was merely quantitative. The scleral cicatrix was hardly visible but the eye was slightly red, the iris discoloured, the pupil fixed in semi-dilatation, and the fundus was grey as if there were a retinal detachment. Tension much diminished. Fellow eye V. A. full. Seven days later the fellow eye began to suffer from photophobia and fleeting obscurations of sight. The wounded eye was then excised and a piece of glass was found in it which measured no less than 8 by 5 mm. and weighed 5 cg. The signs of sympathetic irritation entirely disappeared. The author considers that the prolonged tolerance with retention of vision is most remarkable, and has only been able to find three more or less analogous cases in the literature, one by N. L. Ferguson in the *Ophthalmic Review* for 1885, and two by Bickerton in the *British Medical Journal* for 1888. He believes that his failure to see the fragment in the eye a month after the injury, when the media were clear or nearly so, was due to the foreign body being clear glass (*verre blanc*), and having a refractive index in all probability the same as that of the vitreous.

ERNEST THOMSON.

VIII.—TREATMENT OF TRAUMATIC EXOPHTHALMOS

de Lapersonne and Sendral.—The results of ligation of one, or both, of the common carotid arteries in two cases of traumatic exophthalmos. (Résultat de la ligature uni-ou bilatérale de la carotide primitive dans deux cas d'exophtalmos traumatique.) *Arch. d'Ophtal.*, January, 1920.

" We have watched for more than two years, two cases which appear to us to demonstrate that the only treatment of exophthalmos, due to lesions of large vessels induced by fracture, direct or indirect, of the base of the skull, is to be found in ligature, single or double, of the common carotid artery." These words are preliminary to an interesting and instructive report of two cases successfully treated, the first by ligature of the right common carotid artery, the second by ligature of the right and, after an interval of five months, of the left common carotid. In Case I, a man aet. 37, the lesion, aneurism of the internal carotid, was the result of a shell wound of the head on December 1, 1917. On January 14, 1918, signs of exophthalmos were noted, but it was not until October, 1919, that exophthalmos developed to a degree necessitating interference. On October 30 the right common carotid was ligatured; in five days the man was fit to leave the hospital.

The second case was that of a soldier, aet. 36, who as the result of a railway accident, sustained a fracture of the base of the skull, followed in 48 hours by signs of arterio-venous aneurism in the cavernous sinus. Exophthalmos developed on the left side, and five days afterwards on the right. Three months later the right common carotid was ligatured, with no untoward result, but without much benefit. Five months after this operation the left common carotid was tied, again without unfavourable signs. The result of the second operation was most satisfactory.

The notes of these two cases, reported in considerable detail, are worthy of study, and the remarks by the writers are also interesting, though too long to transcribe. They maintain that in cases such as they report, if ligature of a large artery be deemed advisable, the surgeon's choice should fall upon the common carotid. Ligature of the internal carotid has generally been ineffective, and the cerebral or ocular lesions (immediate or remote) resulting therefrom have been as serious as and even more serious than those consecutive to ligature of the larger vessel. In the *Arch. d'Ophtal.*, November, 1917, a case was reported in which bilateral traumatic exophthalmos was treated by ligature of both internal carotid arteries. The first operation caused immediate blindness of the eye on the same side; the second operation was followed six hours later by hemiplegia, and death occurred on the second day.

J. B. LAWFORD.

IX.—OSTEOMYELITIS

(1) **Cange, Dr. A. (Algiers).—Acute osteomyelitis of the lesser wings of the sphenoid. (L'ostéomyélite aiguë des petites ailes du sphénoïde.)** *Arch. d'Ophtal.*, June, 1921.

(1) **Cange's** case was that of a girl of 16, in sound health, and with no family or personal medical history of importance, who was suddenly seized with intense headache, rigor and high temperature. A deep abscess formed in the orbit and was opened. Temporary improvement followed with formation of a fistula. General symptoms again became severe and she died suddenly within three months of the onset of the disease. Post-mortem examination revealed a large abscess in the temporal lobe. At the bottom of the cavity in the orbit, sequestra corresponding to the lesser wings of the sphenoid were found. These sequestra were of the osteomyelitic type, white, hard and smooth on the one surface. The optic nerve was not implicated and vision was retained to the end.

E. E. H.

(2) **Lemere, H. B. (Omaha).—Progressive osteomyelitis of the frontal bone.** *Jl. Amer. Med. Assoc.*, March 3, 1923.

(2) Diffuse osteomyelitis of the frontal bone is still mysterious as regards aetiology, and its mortality with or without extensive removal of bone is exceedingly high. The case reported by **Lemere** with Roentgen-ray pictures is instructive.

A man of 32 years, two months before he was seen by the author, had an intra-nasal operation for frontal sinus empyema. He had always suffered from nasal catarrh. For three weeks the lids of the right eye had been swollen and the corresponding eye had protruded. When examined by Lemere the right eye was prominent and the upper lid markedly swollen, and the movements of the globe were somewhat restricted. Blurring of the margins of the disc and retinal veins tortuous and swollen. Pus in each middle meatus. A polyp on the right middle turbinate. Pain and tenderness in the right temple and the external angle of the orbit. X-ray examination revealed that all the sinuses were markedly cloudy except the left frontal and ethmoid. The right frontal sinus was opened externally, and found to be full of pus; the floor and part of the anterior wall of the sinus were removed, as well as the anterior ethmoids. A good opening was obtained from the frontal sinus into the nose. On exploring the orbit a collection of pus was found about an inch back from the brow under the upper wall of the orbit and just external to the outer limit of the frontal sinus. The abscess had perforated the upper wall of the orbit and was epidural. The opening was enlarged and connected with the aperture made in removing the floor of the frontal sinus. A free

intranasal opening was made into the right antrum. Drainage tubes were inserted in the orbit. Five days after operation patient's condition was not satisfactory. Pus under pulsation poured from both nostrils; there was a swelling over the right cheek, and on the right side of the roof of the mouth. Patient was dull mentally. A slight cloudiness of the vitreous was found, but the protrusion of the globe had subsided. Both antrums were opened in the canine fossae; the right one was full of polyps. About a month after the first operation a swelling in the forehead was incised with the escape of much pus. During the next two months no fewer than thirteen abscesses over the frontal bone and in the lids and cheeks were incised. Pus was always found, and the abscesses were always connected with bone. Toward the end an abscess formed over the right mastoid and another beyond the fronto-parietal suture, beyond which up to then the osteomyelitis had not progressed. Both were incised. The patient died ninety-five days after he first fell under Lemere's observation. In cultures from the frontal sinus the proteus variety of B. coli were found. The pathological findings included osteomyelitis of the frontal bone with contiguous involvement of the parietal bones; frontal sinus infection; empyema of the sphenoidal cells; basilar meningitis and subarachnoid abscess in the region of the seventh and eighth nerves. The primary cause of death was infection of the frontal sinuses, and the contributory causes osteomyelitis of the frontal bone and basilar meningitis.

S. S.

X.—OCULAR SYMPTOMS IN LITTLE'S DISEASE

Posey, William Campbell (Philadelphia).—Some ocular phases of Little's disease (congenital spastic rigidity of the limbs). *Jl. Amer. Med. Assoc.*, Jan. 13, 1923.

The ocular symptoms in Little's disease, include strabismus, nystagmus, and, rarely, paralysis of the extra-ocular muscles and optic atrophy. Strabismus is the most constant. Feer (? Fehr) found it in 30 per cent. of cases of Little's disease which were without cerebral complications and in 40 per cent. where such was the case. Uhthoff considers that these figures are probably somewhat in excess of the occurrence of the symptom, although in his experience it occurs frequently. **Posey** recounts 3 cases as follows:—1. A man, aged 27 years, with a spastic gait and generally increased reflexes, and convergent strabismus of 40° of the left eye. Parallelism of the visual axes was obtained by operation. 2. Twins, 6 years, in one of whom there was a tendency of the right eye to diverge, and in the other "rather purposeless movements of the eyes." In one of the children examination of the eyes brought on a convulsion.

The patients were watched for several years and remained bright mentally, although neurotic; physically fairly strong. The ocular condition of the child mentioned second is best explained as a rare anomaly of the ocular muscles described by Stevens under the name of "anotropia." The findings of the muscle test were peculiar:—at 5 metres in the primary position there was an exophoria of 14 degrees. When the rod was placed before the right eye it was still below and it required an 8 degree prism, base down, to bring it up even with the light. 3. A boy, aged 4 years, with nystagmus on lateral excursions of the eyeballs.

S.S.

BOOK NOTICES

Colour and Methods of Colour Reproduction. By L. C. MARTIN, D.I.C., A.R.C.S., D.Sc., Lecturer in the Optical Engineering Department, Imperial College of Science and Technology, South Kensington. With Chapters on **Colour Printing and Colour Photography**, by WILLIAM GAMBLE, F.R.P.S., F.O.S. Price 12s. 6d. net. London: Blackie & Son, Ltd. 1923.

This book is somewhat on the same lines as Luckiesh's "Color and its Applications," previously reviewed in this Journal. Both are written by physicists, and cover practically the same ground in the same manner. Mr. Martin's book is the more elementary, though here and there he launches into somewhat abstruse mathematical treatment of special details. These patches we have found rather too condensed for ready apprehension and somewhat out of focus with the other parts of the work. The book is an excellent introduction to the subject. Part I deals with the essentially physical aspects of colour, Part II with the physiological. In Part I methods of colour analysis and synthesis are clearly described and the laws of colour mixture explained. The physical explanations for the colours of pigments, fabrics and natural objects are particularly lucid. The chapter on illumination gives a good account of the characteristics of natural and artificial sources of light, their effects upon the apparent colours of objects, artificial modifications in the colour of light (e.g., artificial daylight), the efficiency of luminous sources in terms of energy, and so on.

There are four chapters in Part II: (1) The Eye and its Reactions to Light; Photometry. This chapter deals with such subjects as brightness and its measurement, colour thresholds, the Purkinje phenomenon, etc. (2) Instruments for Colour Measurement. This is a valuable chapter, describing Abney's colour patch apparatus and many forms of colourimeter. (3) Colour Vision. The theories briefly described are the Trichromatic, Hering's, Ladd-Franklin's,

and Edridge-Green's. The treatment of the subject is from the trichromatic point of view, and gives special prominence to Abney and Watson's researches. (4) Colour Blindness. This is also discussed from the trichromatic standpoint and various tests are described.

A few mistakes have crept in and should be corrected in future editions: (p. 78) "each cone subtends an angle of about one minute (*sic!*) at the posterior nodal point of the eye"; (p. 80) "measurements of the colour fields are generally made when the eye is dark-adapted." (Fig. 32, of colour fields, from Abney, represents the fields as determined under special conditions, and is therefore liable to produce a wrong impression, especially among students of physics). (p. 125) "The characteristic absorption-curve of the visual 'purple,' which has its greatest absorption in the yellow. . ." (p. 141) "It is noteworthy that although no differences of hue can be seen in the spectrum (by the totally colour-blind), the luminosity curve coincides very nearly with that of the normal." The two last-mentioned errors show that the author has quite failed to grasp the extraordinarily interesting significance of the absorption curve of visual purple, which corresponds with the luminosity curves of the *dark-adapted* eye and of the totally colour-blind eye, having therefore its maximum in the *green*.

Part II on Colour Printing and Colour Photography is a masterly brief exposition of these subjects and the principles on which they are founded.

The book is excellently printed and illustrated.

An International Congress of Ophthalmology (Washington, D.C.) Printed by Wm. F. Fell Co., Philadelphia, April 25, 26, 27, 28, 1922. Price 10 dollars.

This volume of 709 pages (exclusive of index) embodies the proceedings of an International Congress of Ophthalmologists held at Washington, D.C., from April 25-28, 1922, under the auspices of the American Ophthalmological Society, the Section of Ophthalmology of the American Medical Association, and of the American Academy of Ophthalmology and Oto-Laryngology. It includes many valuable communications in the three official languages, namely, English, French and Spanish. Abstracts of the papers will be published in these columns in due course, but we may specially mention the following communications by Gullstrand "On diaphragm lamps in Ophthalmology", by Sir William Lister on "Detachment of the Vitreous", by Mr. E. Treacher Collins on "Hereditary Ocular Degenerations", by Dr. A. Magitot on "Orbital Marsupialization and superiority of Organic Grafts of Dead Tissue in establishing a Mobile Stump" by Dr. Cheney on the "Types of Pneumococcus found in Corneal Ulcers",

by Colonel Elliot on "Diagnosis of Glaucoma", by Mr. A. S. Percival on the "Light-Sense", by Dr. Greenwood on "Carcinoma of the Choroid" and by Dr. A. J. Bedell on "Chloroma" as models of what such communications should be. Three propositions for Congress action were submitted:—(1) By Dr. A. E. Ewing on "The Value of Letters and Characters as Visual Tests"; (2) by Dr. M. Uribe Troncoso on "Ophthalmologic *versus* Anatomic Nomencalture." It was agreed that "The International Congress of Ophthalmology, held in Washington, U.S.A., recommends to the authors and editors of books and essays dealing with ophthalmology to adhere faithfully to the anatomic nomenclature, and always consider the subject standing or lying down in front of the observer, his right hand facing the left hand of the latter. This rule to be applied both to objective and subjective examinations of the eye, and also to the visual field"; (3) by Dr. Luther C. Peter on "The standardization of Perimetric Technic." Dr. Peter submitted the following:—"Resolved that a committee be appointed by the President of this Congress of Ophthalmology now assembled, to consider and to recommend to this Congress, before its close, a standard in technic which may be applicable in any part of the civilized world. First, with reference to the designation of the test objects or stimuli in degrees, minutes, or seconds. Second, the designation of the pigments, or papers, to be employed as coloured stimuli in definite and understandable language, by which they can be reproduced by the manufacturers of perimetric instruments. Third, uniformity in charts. Fourth, a standard method of illumination. Fifth, a method by which pre-exposure and surrounding field may be applied to perimetric studies. Sixth, the use of instruments in field studies with special reference to the needs of the case. Seventh, other recommendations which, in the judgment of the committee, may seem advisable at this time." Finally, addresses were delivered before the Congress:—"Some descriptive errors in the Anatomy of the Orbit," by Prof. S. E. Whitnall; on "The Clinical Anatomy of the Efferent Lacrimal Passageways," by J. Parsons Schaeffer; "Facts and Theories of Colour Vision," by Prof. L. T. Troland; "The Production and Transmission of Certain Eye Defects," by Prof. M. F. Guyer; and "A New Technic for the application of the method of Cajal to Sections of the Retina," by Dr. F. F. Balbuena. S. S.

Ocular Neuritis due to Lead. By J. LOCKHART GIBSON. The Australasian Medical Publishing Company, Limited, 30-34, Elizabeth Street, Sydney. 1922.

For some years it was known that Queensland children were subject to a peculiar group of symptoms believed to be due to a

form of localized basal meningitis. The disease, however, was not fatal. Dr. Lockhart Gibson saw many of these cases in Brisbane, and found in most of the patients referred to him that the most prominent signs were double optic neuritis and paresis of one external rectus—hence the name "ocular neuritis" he gives to the condition. His thoughts were directed to lead as a possible cause, first by the fact that coincident with the admission of the eye cases many cases of chronic lead poisoning were received, and, secondly, one patient showed, in addition to the eye symptoms, wrist drop. In others traces of lead were found in the urine. He at first thought that the source of contamination was to be sought in tank water, but eventually satisfied himself that it was due to the lead used in painting the rails of the verandahs of the houses where the patients lived. The paint, as it were, had weathered and was within easy reach of the children who invariably sucked their fingers or bit their nails, and in that way conveyed the poison into their systems. In the pamphlet under notice Gibson reprints nine of the more important contributions he has made to the subject, and many will be grateful to him for doing so. Incidentally the collection shows how large a part the author took in solving the mystery of the aetiology of the disease.

S.S.

CORRESPONDENCE

THE BOWMAN LIBRARY

To the Editor of THE BRITISH JOURNAL OF OPHTHALMOLOGY

SIR,—You were good enough to publish a letter from me last year in Volume VI, p. 381, on the missing numbers of some periodicals in the library. Will you allow me space in which to report progress? The following journals have been brought up to date by the inclusion of missing parts:—

Klinische Monatsblätter für Augenheilkunde (1 part).
Archives d'Ophtalmologie (1 part).
The Ophthalmoscope (1 volume).
R. L. O. H. Reports (1 volume and 1 part).
Archivos de Oftalmologia Hispano-Americanos (2 parts).

The management of the *American Journal of Ophthalmology* has sent us the first five volumes of that journal, viz., 1918-1922, together with Vols. XVII and XVIII of *Ophthalmic Literature*; one of these parts was the last in stock. I am sure that English Ophthalmologists will appreciate this kindness on the part of the

American Journal. A set of the *Beitrage zur Augenheilkunde* from Vol. I has been purchased by the Royal Society of Medicine, which, with the few parts of this journal which we already possessed, will give us a complete run of this journal to the end of the year 1917.

Archives für Ophthalmologie (von Graefe) sent four volumes in exchange for Vol. XLII of the *Transactions of the Ophthalmological Society of the United Kingdom.*

I should like to express my gratitude to the many friends of the Bowman Library who have aided me in bringing the Library as much up to date as is possible at the present time.

Yours faithfully,

R. R. JAMES (Hon. Librarian).

OPHTHALMOMYIASIS

To the Editor of THE BRITISH JOURNAL OF OPHTHALMOLOGY

SIR,—Respecting the article on " Ophthalmomyiasis " by Dr. Ticho in the April number of the BRITISH JOURNAL OF OPHTHALMOLOGY, the following references are of interest:—

Wahba: Bulletin of the Ophthalmological Society of Egypt, 1915.

Barsoum: Bulletin of the Ophthalmological Society of Egypt, 1917.

Oulton: Bulletin of the Ophthalmological Society of Egypt, 1917.

Since 1916, 32 cases of external ophthalmomyiasis have been reported from various ophthalmic hospitals in Egypt and recorded in the annual reports of the Ophthalmic Section of the Department of Public Health. Most of the larvae from these cases have been examined and cultivated by the Egyptian Government entomologists Dr. Gough or Dr. Mangan and identified as *wohlfahrtia magnifica schiner,* or as *cordylobia anthropophaga.*

The great interest in Dr. Ticho's cases lies in the fact that they occurred quite suddenly as the result of intrusion into the conjunctival sac of viviparous larvae by diptera. Such a case was reported by Saleh (Bulletin of the Ophthalmological Society of Egypt, 1917). In the other cases seen in Egypt, the larvae were found in the orbital tissues. The wohlfahrtia is viviparous but not the cordylobia.

I am, Sir, Yours faithfully,

A. F. MACCALLAN.

CAIRO, *April* 17, 1923.

ELECTRIC OPHTHALMOSCOPES

To the Editor of THE BRITISH JOURNAL OF OPHTHALMOLOGY

SIR,—Last year, after having used an ordinary electric ophthalmoscope for some time, I found that if the light was sufficiently powerful to see the disc in an ordinary room, there was a haze round the slot in the mirror, and also from the transverse beam.

I tried various forms of mirrors—glass, steel, and silver—but could not obviate this haze, and back light from the slot. I then tried building a small hood round the slot, but found this interfered somewhat with the vision.

As a last resort I decided to try having a glass prism slotted. This I entrusted to Messrs. George Spiller, Ltd., who took a careful interest in the work, and produced a small, silvered prism, with a slot for vision. With this they have now made for me an ophthalmoscope, from which there is no back light, or haze, so that the light can now be much stronger, and a good view of the disc obtained in full daylight.

Yours truly,

D. HARDCASTLE.

BUSHEY, HERTS.
May 8th, 1923.

NOTES

Deaths

WE regret to announce the death of CHARLES KILLICK, of Bradford, at the age of 48 years. He appears to have infected his finger while examining an ophthalmic patient, and died from septicaemia ten days' later, on April 27 last. He was buried in Undercliffe Cemetery, Bradford. He leaves a widow and two sons and two daughters (still children) to mourn his premature decease. Killick was born at Rawdon, Yorks, the son of Henry Fison Killick, a well-known lawyer practising his profession in Bradford, now retired and living at Bournemouth. Charles Killick was educated at Rossal Preparatory School, Montreux, and Bradford Grammar School. In due course he went to Cambridge (Trinity College), and after taking his arts degree with honours in the natural science tripos, he gained a university scholarship at St. Mary's Hospital, London. From the first he showed an inclination towards eye work. He went to Maidstone as house surgeon to the Kent County Ophthalmic Hospital, remained in that town as an ophthalmic surgeon, and

was appointed to the staff of the Ophthalmic Hospital. During the war Killick served with the First Home Counties Ambulance, as lieutenant, captain, and major (T.D.). He was given a specialist appointment, and five ophthalmic centres were placed in his charge. Later he was stationed at Aylesbury, and while there placed upon the staff of the Royal Buckinghamshire Hospital in that town. He was appointed ophthalmic surgeon to the Bradford Royal Eye and Ear Hospital in 1919, and put on the staff of the Bradford Royal Infirmary in 1922. He had served upon the Pensions Board (Bradford) as specialist since 1919. He delighted in touring the Yorkshire dales, and had explored afoot much of that interesting country. Roman archaeology interested him, and he was a member of the Bradford Antiquarian Society. He was a great reader of French history. Of late years he had become interested in freemasonry, and such was his mastery of the ritual that had his life been spared a few years longer, there is little doubt that he would have reached high rank in the craft.

Ophthalmic surgeons in this country will learn with regret of the death of DR. FIRMIN MUÑOZ URRA, which occurred at Talavera de la Reina (Toledo), on February 2, 1923. Dr. Muñoz Urra was one of the most distinguished of the younger European ophthalmologists, and his death at the early age of thirty years is a great blow to Spanish ophthalmology. He had only spent eight years in the practice of his profession, but in this short time had made a name for himself, more particularly in laboratory work, which extended far beyond the borders of his native land; as a pupil of Ramón y Cajal it was natural that he should have been drawn towards the laboratory side of ophthalmology. A bibliography of his published works occupies rather more than two pages of small type in the April number of the *Archivos de Oftalmologia Hispano-Americanos*.

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Appointments

MR. BASIL GRAVES has been appointed pathologist and curator to the Royal Westminster Ophthalmic Hospital.

MR. GEORGE MAXTED has been appointed ophthalmic surgeon to the Jenny Lind Hospital for Children, Norwich.

DR. G. L. MITCHELL has been appointed school oculist (part time) to the Worcester County Council.